

PATENT COOPERATION TREATY
PCT
INTERNATIONAL PRELIMINARY EXAMINATION REPORT

REC'D 24 OCT 2001
 WIPO PCT

(PCT Article 36 and Rule 70)

14

Applicant's or agent's file reference TP 1333	FOR FURTHER ACTION	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/SE00/01661	International filing date (day/month/year) 30.08.2000	Priority date (day/month/year) 07.09.1999
International Patent Classification (IPC) or national classification and IPC7 B32B 31/12, B32B 27/10, B65D 65/40		
Applicant Tetra Laval Holdings & Finance SA et al		

<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>5</u> sheets, including this cover sheet.</p> <p><input type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of _____ sheets.</p>	
<p>3. This report contains indications relating to the following items:</p> <ul style="list-style-type: none"> I <input checked="" type="checkbox"/> Basis of the report II <input type="checkbox"/> Priority III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability IV <input type="checkbox"/> Lack of unity of invention V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement VI <input checked="" type="checkbox"/> Certain documents cited VII <input type="checkbox"/> Certain defects in the international application VIII <input type="checkbox"/> Certain observations on the international application 	

Date of submission of the demand 04.04.2001	Date of completion of this report 19.09.2001
Name and mailing address of the IPEA/SE Patent- och registreringsverket Box 5055 S-102 42 STOCKHOLM	Authorized officer Barbro Nilsson/Els Telephone No. 08-782 25 00
Facsimile No. 08-667 72 88	

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/SE00/01661

I. Basis of the report

1. With regard to the elements of the international application:*

 the international application as originally filed the description:

pages _____, as originally filed

pages _____, filed with the demand

pages _____, filed with the letter of _____

 the claims:

pages _____, as originally filed

pages _____, as amended (together with any statement) under article 19

pages _____, filed with the demand

pages _____, filed with the letter of _____

 the drawings:

pages _____, as originally filed

pages _____, filed with the demand

pages _____, filed with the letter of _____

 the sequence listing part of the description:

pages _____, as originally filed

pages _____, filed with the demand

pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

 the language of a translation furnished for the purposes of international search (under Rule 23.1(b)). the language of publication of the international application (under Rule 48.3(b)). the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

 contained in the international application in written form. filed together with the international application in computer readable form. furnished subsequently to this Authority in written form. furnished subsequently to this Authority in computer readable form. The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished. The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.4. The amendments have resulted in the cancellation of: the description, pages _____ the claims, Nos. _____ the drawings, sheet/fig _____5. This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2 (c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/SE00/01661

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	<u>1-18</u>	YES
	Claims	_____	NO
Inventive step (IS)	Claims	<u>1-18</u>	YES
	Claims	_____	NO
Industrial applicability (IA)	Claims	<u>1-18</u>	YES
	Claims	_____	NO

2. Citations and explanations (Rule 70.7)

The closest prior art cited in the International Search Report is considered to be WO 9713639 (document D1). In this document, a liquid barrier composition, including a dispersion or solution of a polymer, is applied as a barrier layer (14) on a core layer (11) of paper or paperboard. Before the barrier layer is applied, a layer of plastic is extruded on the core layer. In this way the risk of undesired curling, which can result if the barrier layer is applied directly to the core layer, and the consequential risk of crack formation of the barrier layer is eliminated.

In the claimed invention a liquid barrier is applied on a carrier layer and dried in a first step. Thereafter the dried barrier layer is combined with the core layer in a second step. Then the dried barrier layer is cured by heating to a temperature, which is higher than the drying temperature. Thus, the claimed invention differs from the cited document and the claimed invention is novel.

The claimed invention solves the problem with crack formation but in a different way than in D1. An additional advantage of the claimed invention is that the same production equipment, as in the production of packaging material using aluminium foil as the barrier layer, can be used. With the knowledge of D1 the claimed invention is not considered obvious to a person skilled in the art.

.../...

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

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Supplemental Box

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: V

The International Search Report also cites WO 9809812 (document D2) and US 3876452 (document D3). D2 discloses a packaging laminate with a gas barrier layer applied as dispersion coating. It is stated in the document that the laminate may include a core layer of, for example, paper or paperboard. D3 discloses a material coated with an aqueous dispersion of a polymer. An assembly of the coated material with a paper can be prepared. However, it is not evident from D2 and D3 to solve the problem with cracking. Moreover, the documents do not disclose that the barrier layer is cured after lamination with the core layer.

According to the arguments stated above, the claimed invention is novel, considered to involve an inventive step and have industrial applicability.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/SE00/01661

VI. Certain documents cited

1. Certain published documents (Rule 70.10)

Application No. Patent No.	Publication date (day/month/year)	Filing date (day/month/year)	Priority date (valid claim) (day/month/year)
WO 9946121	16.09.1999	09.03.1999	10.03.1998

2. Non-written disclosures (Rule 70.9)

Kind of non-written disclosure	Date of non-written disclosure (day/month/year)	Date of written disclosure referring to non-written disclosure (day/month/year)

The demand must be filed directly with the competent International Preliminary Examining Authority or, if two or more Authorities are competent with the one chosen by the applicant. The full name or two-letter code of that Authority may be indicated by the applicant on the line below:

IPEA/ SE

PCT

CHAPTER II

DEMAND

under Article 31 of the Patent Cooperation Treaty:

The undersigned requests that the international application specified below be the subject of international preliminary examination according to the Patent Cooperation Treaty and hereby elects all eligible States (except where otherwise indicated).

For International Preliminary Examining Authority use only

Identification of IPEA	Date of receipt of DEMAND
Box No. I IDENTIFICATION OF THE INTERNATIONAL APPLICATION	
International application No. PCT/SE00/01661	International filing date (day/month/year) 30-08-2000
Title of invention A method of producing a laminated packaging material, and packaging containers produced from the packaging material	
Box No. II APPLICANT(S)	
Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.) TETRA LAVAL HOLDINGS & FINANCE S A Av. Général-Guisan 70 CH-1009 PULLY Switzerland	Telephone No.: 41 217292211
	Facsimile No.: 41 217292759
	Teleprinter No.: 41 21455811
State (that is, country) of nationality: CH	State (that is, country) of residence: Switzerland
Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.) BERLIN, Mikael Fjelievägen 138, 4 vån. S-227 36 LUND Sweden	
State (that is, country) of nationality: SE	State (that is, country) of residence: Sweden
Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.) BENTMAR, Mats Hästhovsgatan 8 S-233 37 SVEDALA Sweden	
State (that is, country) of nationality: SE	State (that is, country) of residence: Sweden
<input checked="" type="checkbox"/> Further applicants are indicated on a continuation sheet.	

Continuation of Box No. II APPLICANT(S)

If none of the following sub-boxes is used, this sheet should not be included in the demand.

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)

FLEMMER-KARLSSON, Katarina
 Skyttelinjen 79
 S-226 49 LUND
 Sweden

State (that is, country) of nationality:

SE

State (that is, country) of residence:

Sweden

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)

State (that is, country) of nationality:

State (that is, country) of residence:

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)

State (that is, country) of nationality:

State (that is, country) of residence:

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)

State (that is, country) of nationality:

State (that is, country) of residence:



Further applicants are indicated on another continuation sheet.

Box No. III AGENT OR COMMON REPRESENTATIVE; OR ADDRESS FOR CORRESPONDENCE

The following person is agent common representative

and has been appointed earlier and represents the applicant(s) also for international preliminary examination.

is hereby appointed and any earlier appointment of (an) agent(s)/common representative is hereby revoked.

is hereby appointed, specifically for the procedure before the International Preliminary Examining Authority, in addition to the agent(s)/common representative appointed earlier

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)

PERSSON, Eva
AB TETRA PAK
Ruben Rausings gata
S-221 86 LUND
Sweden

Telephone No.:

046-36 18 25

Faxsimile No.:

046-13 79 23

Teleprinter No.:

32140 TPLUND S

Address for correspondence: Mark this check-box where no agent or common representative is has been appointed and the space above is used instead to indicate a special address to which correspondence should be sent.

Box No. IV BASIS FOR INTERNATIONAL PRELIMINARY EXAMINATION

Statement concerning amendments:*

1. The applicant wishes the international preliminary examination to start on the basis of:

the international application as originally filed

the description as originally filed

as amended under Article 34

the claims as originally filed

as amended under Article 19 (together with any accompanying statement)

as amended under Article 34

the drawings as originally filed

as amended under Article 34

2. The applicant wishes any amendment to the claims under Article 19 to be considered as reversed.

3. The applicant wishes the start of the international preliminary examination to be postponed until the expiration of 20 months from the priority date unless the International Preliminary Examining Authority receives a copy of any amendments made under Article 19 or a notice from the applicant that he does not wish to make such amendments (Rule 69.1(d)). (This check-box may be marked only where the time limit under Article 19 has not yet expired.)

* Where no check-box is marked, international preliminary examination will start on the basis of the international application as originally filed or, where a copy of amendments to the claims under Article 19 and/or amendments of the international application under Article 34 are received by the International Preliminary Examining Authority before it has begun to draw up a written opinion or the international preliminary examination report, as so amended.

Language for the purposes of international preliminary examination: English

which is the language in which the international application was filed.

which is the language of a translation furnished for the purposes of international search.

which is the language of publication of the international application.

which is the language of the translation (to be) furnished for the purposes of international preliminary examination.

Box No. V ELECTION OF STATES

The applicant hereby elects all eligible States (that is, all States which have been designated and which are bound by Chapter II of the PCT)

excluding the following States which the applicant wishes not to elect:

Box No. VI CHECK LIST

The demand is accompanied by the following elements, in the language referred to in Box No. IV, for the purposes of international preliminary examination:

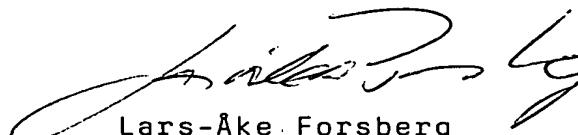
		sheets	For International Preliminary Examining Authority use only	
			received	not received
1.	translation of international application		<input type="checkbox"/>	<input type="checkbox"/>
2.	amendments under Article 34		<input type="checkbox"/>	<input type="checkbox"/>
3.	copy (or, where required, translation) of amendments under Article 19		<input type="checkbox"/>	<input type="checkbox"/>
4.	copy (or, where required, translation) of statement under Article 19		<input type="checkbox"/>	<input type="checkbox"/>
5.	letter		<input type="checkbox"/>	<input type="checkbox"/>
6.	other (specify)		<input type="checkbox"/>	<input type="checkbox"/>

The demand is also accompanied by the item(s) marked below:

1. <input checked="" type="checkbox"/> fee calculation sheet	4. <input type="checkbox"/> statement explaining lack of signature
2. <input type="checkbox"/> separate signed power of attorney	5. <input type="checkbox"/> nucleotide and or amino acid sequence listing in computer readable form
3. <input type="checkbox"/> copy of general power of attorney; reference number, if any:	6. <input type="checkbox"/> other (specify):

Box No. VII SIGNATURE OF APPLICANT, AGENT OR COMMON REPRESENTATIVE

Next to each signature, indicate the name of the person signing and the capacity in which the person signs (if such capacity is not obvious from reading the demand).



Lars-Åke Forsberg
Corporate Patent Manager

For International Preliminary Examining Authority use only

1. Date of actual receipt of DEMAND:

2. Adjusted date of receipt of demand due
to CORRECTIONS under Rule 60.1(b):

3. The date of receipt of the demand is AFTER the expiration of 19 months
from the priority date and item 4 or 5, below, does not apply. The applicant has been
informed accordingly.

4. The date of receipt of the demand is WITHIN the period of 19 months from the priority date as extended by virtue of
Rule 80.5.

5. Although the date of receipt of the demand is after the expiration of 19 months from the priority date, the delay in arrival
is EXCUSED pursuant to Rule 82.

For International Bureau use only

Demand received from IPEA on:

PCT

FEE CALCULATION SHEET

Annex to the Demand for international preliminary examination

International application No. PCT/SE00/01661	For International Preliminary Examining Authority use only	
Applicant's or agent's file reference TP 1333	Date stamp of the IPEA	
Applicant TETRA LAVAL HOLDINGS & FINANCE S A		
Calculation of prescribed fees		
1. Preliminary examination fee	4.200 : -	P
2. Handling fee <i>(Applicants from certain States are entitled to a reduction of 75% of the handling fee. Where the applicant is (or all applicants are) so entitled, the amount to be entered at H is 25% of the handling fee.)</i>	1.270 : -	H
3. Total of prescribed fees Add the amounts entered at P and H and enter total in the TOTAL box	5.470 : -	TOTAL
Mode of Payment		
<input checked="" type="checkbox"/> authorization to charge deposit account with the IPEA (see below)	<input type="checkbox"/> cash	
<input type="checkbox"/> cheque	<input type="checkbox"/> revenue stamps	
<input type="checkbox"/> postal money order	<input type="checkbox"/> coupons	
<input type="checkbox"/> bank draft	<input type="checkbox"/> other (specify):	

Deposit Account Authorization *(this mode of payment may not be available at all IPEAs)*

The IPEA/ SE is hereby authorized to charge the total fees indicated above to my deposit account.

(this check-box may be marked only if the conditions for deposit accounts of the IPEA so permit) is hereby authorized to charge any deficiency or credit any overpayment in the total fees indicated above to my deposit account.

1346

3 April 2001

Deposit Account Number

Date (day/month/year)

Signature Lars-Åke Forsberg

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference TP 1333-WO	FOR FURTHER ACTION	see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.
International application No. PCT/SE 00/01661	International filing date (day/month/year) 30 August 2000	(Earliest) Priority Date (day/month/year) 7 Sept 1999
Applicant Tetra Laval Holdings & Finance SA et al		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 3 sheets.

It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international search was carried out on the basis of the sequence listing:

contained in the international application in written form.

filed together with the international application in computer readable form.

furnished subsequently to this Authority in written form.

furnished subsequently to this Authority in computer readable form.

the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

2. Certain claims were found unsearchable (See Box I).

3. Unity of invention is lacking (See Box II).

4. With regard to the title,

the text is approved as submitted by the applicant.

the text has been established by this Authority to read as follows:

5. With regard to the abstract,

the text is approved as submitted by the applicant.

the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the drawings to be published with the abstract is Figure No. 3

as suggested by the applicant.

because the applicant failed to suggest a figure.

because this figure better characterizes the invention.

None of the figures.

1
INTERNATIONAL SEARCH REPORT

International application No.

PCT/SE 00/01661

A. CLASSIFICATION OF SUBJECT MATTER

IPC7: B32B 31/12, B32B 27/10, B65D 65/40

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7: B32B, B65D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE, DK, FI, NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 9809812 A1 (TETRA LAVAL HOLDINGS & FINANCE S.A.), 12 March 1998 (12.03.98), page 1; page 6, line 9 - page 7, line 16; page 9, line 16 - page 10, line 7, abstract --	1-16
Y	US 3876452 A (HARRY D. ANSPON ET AL), 8 April 1975 (08.04.75), example IA and IV --	1-16
X	WO 9713639 A1 (TETRA LAVAL HOLDINGS & FINANCE S.A.), 17 April 1997 (17.04.97), page 8, line 3 - line 12, abstract --	17-18

 Further documents are listed in the continuation of Box C. See patent family annex.

* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family
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Date of the actual completion of the international search

Date of mailing of the international search report

12-12-2000

8 December 2000

Name and mailing address of the ISA/
Swedish Patent Office
Box 5055, S-102 42 STOCKHOLM
Facsimile No. + 46 8 666 02 86

Authorized officer

Barbro Nilsson/Els
Telephone No. + 46 8 782 25 00

INTERNATIONAL SEARCH REPORT

Information on patent family members

02/11/00

International application No.

PCT/SE 00/01661

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9809812 A1	12/03/98	EP 0927101 A NO 991032 A SE 9603211 A	07/07/99 04/05/99 05/03/98
US 3876452 A	08/04/75	BE 692973 A DE 1520778 A FR 1353475 A GB 1009016 A NL 126914 C NL 282012 A SE 317194 B US 3485785 A US 3486929 A US 3573094 A US 3970626 A DE 1546862 A FR 1402185 A NL 6406361 A	03/07/67 08/02/73 03/06/64 00/00/00 00/00/00 10/11/69 23/12/69 30/12/69 30/03/71 20/07/76 18/12/69 18/10/65 07/12/64
WO 9713639 A1	17/04/97	AU 710893 B AU 7380196 A BR 9610962 A EP 0855956 A JP 11513332 T SE 505087 C SE 9503494 A	30/09/99 30/04/97 04/05/99 05/08/98 16/11/99 23/06/97 10/04/97
WO 9946121 A1	16/09/99	AU 2728599 A EP 1009617 A SE 9800769 D AU 4141499 A AU 9288498 A EP 1015483 A SE 9801675 D WO 9958331 A	27/09/99 21/06/00 00/00/00 29/11/99 12/04/99 05/07/00 00/00/00 18/11/99
WO 9722536 A1	26/06/97	AU 1218997 A EP 0868363 A	14/07/97 07/10/98

INTERNATIONAL SEARCH REPORT

International application No.

PCT/SE 00/01661

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,A	WO 9946121 A1 (TETRA LAVAL HOLDINGS & FINANCE S.A.), 16 Sept 1999 (16.09.99), the claims --	1-18
A	WO 9722536 A1 (TETRA LAVAL HOLDINGS & FINANCE S.A.), 26 June 1997 (26.06.97), page 11, line 23 - line 33, abstract -- -----	1-18